

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/010297

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ F28D15/02, F25D11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ F28D15/02, F25D11/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 62-66097 A (Fujikura Densen Kabushiki Kaisha), 25 March, 1987 (25.03.87), Page 5, upper right column, line 3 to lower left column, line 9; Fig. 5 (Family: none)	1, 2 3, 7, 8, 12, 13
Y	WO 02/16836 A1 (SHARP KABUSHIKI KAISYA), 28 February, 2002 (28.02.02), Page 11, line 15 to page 13, line 26; Fig. 5 & EP 1312875 A1 & JP 14-71237 A & JP 14-221384 A	3-24
Y	JP 6-185245 A (Mitsubishi Electric Corp.), 05 July, 1994 (05.07.94), Par. Nos. [0057] to [0058]; Figs. 4 to 5 (Family: none)	4-24

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search
18 October, 2004 (18.10.04)Date of mailing of the international search report
02 November, 2004 (02.11.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.


Telephone No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 186429/1985 (Laid-open No. 93574/1987) (Fujikura Densen Kabushiki Kaisha), 15 June, 1987 (15.06.87), Page 3, line 15 to page 4, line 8; Figs. 1 to 2 (Family: none)	6-15, 20-24 
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 142409/1987 (Laid-open No. 48560/1989) (Mitsubishi Electric Corp.), 24 March, 1989 (24.03.89), Page 4, line 2 to page 5, line 1; Fig. 1 (Family: none)	16, 17
Y	JP 4-369391 A (Kobe Steel, Ltd.), 22 December, 1992 (22.12.92), Par. Nos. [0012], [0017]; Fig. 7 (Family: none)	20-24
Y	JP 2002-267377 A (Tsuinbado Kogyo Kabushiki Kaisha), 18 September, 2002 (18.09.02), Par. Nos. [0015] to [0017]; Fig. 2 (Family: none)	23, 24